of each of the finger sections 9 shown in FIG.6.

As shown in FIG.4, the finger section 9 in the present constitutional example is composed of an inversely spreading section 11, an electric power computational section 12, a maximum value detecting section 13, and a selector section 14.

The inversely spreading section 11 converts digital base band signals converted by the AD section 3 into data. Furthermore, the inversely spreading section 11 performs inverse spreading within a predetermined segment positioned between before and after segments of a path timing allocated by the finger allocating section 8 (hereinafter referred to as "path tracking range"). For instance, when inverse spreading is performed within path tracking ranges defined among five sections extending over before and after path timing, the inversely spreading section 11 outputs symbol data reside among the five sections, i.e., five symbol data.

The electric computational section 12 computes each of electric power values of the five symbol data output from the inversely spreading section 11. The maximum value detecting section 13 detects the maximum value among five electric power values computed by the electric power computational section 12.

The selector section 14 selects only the symbol data having the maximum electric power value detected by the maximum value detecting section 13 among the five symbol data computed in the inversely spreading section 11 to output them.

As described above, inverse spreading is implemented within a predetermined path tracking range among segments positioned in between before and after the path timing instructed by the finger allocating section 8 thereby to acquire data, and the maximum

electric power value is retrieved from the data, so that the finger section 9 follows delicate fluctuation.

In a conventional mobile station as mentioned above, however, when it is assumed that there are three radio waves being arrived from a base station to the mobile station (radio waves A, B, and C) and that each of path timings in the radio waves A, B, and C is allocated to each of separate finger sections in the case where distances of peak positions in the three radio waves are narrow, respectively, as shown in FIG.5, inverse spreading is implemented within a predetermined path tracking range defined among segments positioned in between before and after a path timing in each finger section. As a result, inverse spreading timings in all the finger sections overlap with the radio wave A residing at a point of the maximum electric power value, whereby a plurality of radio waves comes to be not received, so that there is a problem of deteriorating reception property in mobile station.

SUMMARY OF THE INVENTION

Accordingly, the present invention has been made in view of the problems involved in the prior art as mentioned above. An object of the present invention is to provide a mobile station and a method for allocating a finger thereof in CDMA communication system by which a plurality of radio waves is positively received in even a case where distances of peak positions in the plurality of radio waves being arrived from a base station to the mobile station are narrow, whereby deterioration in reception property can be prevented.

In order to achieve the above-described object, a mobile station in CDMA communication system according to the present invention wherein the mobile station is composed of a plurality of finger sections in each of which each of plural radio waves being arrived from a base station through a plurality of paths is inversely spread to regenerate data from the base station, and a finger allocating section for allocating a path timing corresponding to each peak position of the plurality of radio waves to each of the plurality of finger sections; each of the plurality of radio waves is inversely spread in a path tracking range among segments positioned before and after the path timing allocated by the finger allocating section comprises the path tracking range being variable in each of the plurality of finger sections.

Furthermore, a mobile station in CDMA communication system according to the present invention as described above is characterized in that the finger allocating section instructs the path tracking range with respect to each of the plurality of finger sections; and each of the plurality of finger sections makes variable the path tracking range on the basis of the instruction by the finger allocating section.

Moreover, a mobile station in CDMA communication system according to the present invention as described above is characterized in that the finger allocating section decides the path tracking range in each of the plurality of finger sections on the basis of each distance of peak positions in the plurality of radio waves.

Still further, a mobile station in CDMA communication system according to the present invention as described above is